THE FARMER & GARDENER.

PUBLISHED EVERY TUESDAY BY THE PROPRIETORS, E. P. ROBERTS AND SANDS & NEILSON—EDITED BY E. P. ROBERTS.

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American Farmer Establishment.

BALTIMORE: TUESDAY, JAN 24, 1837.

The subject of the proper use of Lime, as an improver of the soil, is one of profound interest to every one engaged in its cultivation, and from the anxious concern we see expressed in various quarters, we feel convinced that a spirit of inquiry has been awakened that will ultimately tend to great and lasting benefits. To us there is no proposition connected with the business of husbandry more susceptible of proof, than this—that lands which may have been exhausted by long continued adherence to a bad course of cropping, cannot be resuscitated beyond their original state of fertility, without the application of *lime*, or some other calcareous manures. We will go further and say,—that any soils which are not already charged with such substances, may be brought to a state of fertility far beyond their original condition by their use. Believing thus, we feel an anxious solicitude, so far as it may be within the compass of our ability, to lay before our farming brethren, all such matters as may come under our observation calculated to illumine their minds thereon. With this object in view, we have inserted in another part of this day's paper several communications from practical men, which we doubt not will attract attention. The reader of these communications will perceive that a diversity of opinion exists as to the proper quantity to be used. While one thinks he has derived the most advantage from the use of *fifty* bushels to the acre, another speaks highly of the beneficial effects which he had seen from the application of from two to three hundred bushels to the acre. Indeed, the best British authorities are full of instances where from five hundred to six hundred and forty bushels have been applied with success to the same quantity of land. In the midst of this diversity of opinion, and difference in practice, as to *quantity*, we think the safest plan would be to use the lesser quantity; for we are decidedly of opinion that 50 bushels to the acre at a dressing, to be repeated at each interval of ploughing in a clover-ley for some two or three times, is quite sufficient for all present purposes—and here it will be recollected, that M. *Puvis* speaks of it as a practice which has obtained among the more judicious farmers of a part of France, to put on but 25 bushels to the acre, and repeat that dose periodically. If then 25 bushels have been found to be productive of good, certainly no one should hesitate in believing that twice that quantity would be found efficacious. We all know that one of the great obstacles to the free use of lime, has arisen from the belief that from one to three hundred bushels were requisite to be used on an acre; the expense of which necessarily deterring many persons from its use, who might otherwise have been induced to adopt it as a means of meliorating the condition of their soils. But if *fifty* bushels should be found to answer all necessary purposes, that objection will cease to operate, and we shall soon have the satisfaction to see it introduced into much more general use. With this brief exposition of our views, we bespeak for the communications in question the attention of our readers.

Agreeably to our intimation in the last number of our journal, we visited Mr. Beltzhoover's farm, situate about two miles from the city, to the right of the Frederick road, to view those of the cattle imported by Mr. Shepherd, that had been sent thither before we called down at his residence to see them, and were highly gratified. They consisted of *five Durham Heifers*, one bull calf of the same breed, two Ayrshire heifers in calf, one calf of the same breed, and three fine English pigs.

Two of the Durham heifers, one a two year old, with her first calf, and a one year old, were very thin from the effects of their protracted voyage, but shewed fine points. The two year old is a noble young animal, beautifully marked, red and white, of admirable proportions, displaying in an eminent degree the unerring indications of making a deep milker, and presenting in the whole the frame-work of a fine cow. The yearling is nearly white, with a few red spots about the neck, and is a creature of large dimensions, being now though so young and spare of flesh, nearly equal in size to most of our native cows. She is, we learn a great favorite with Mr. Shepherd's agent in England, and proceeds from a stock of much note, belonging to the late Mr. *Denton*, at the sale of whose effects she was purchased.

The other three Durham heifers are dark strawberry or mottled red, with white spots, and are fine models of their generous breed. The bull calf bought at the sale of the Rev. Mr. Berry's stock is a handsome red and white, and like his companions of the voyage, is every inch a Durham.

The two Ayrshire heifers have all the characteristic marks of their peculiar and excellent breed. They are in calf by an Ayrshire bull.

The three pigs of which we speak are fine young porkers. Two of them are white, the other of sandy-ground with black and white spots. The latter we think a Berkshire, and though a fine pig, cannot compare with the other two.—Indeed, we do not know that we have ever seen any thing of the hog kind, that so pleased us as did the two white pigs. The *boar*, in particular, struck us as being a pre-eminent specimen of his race, possessing a length of body, which is as round as a barrel, superior to any thing we have ever beheld of the same age. Mr. Shepherd's agent not having written him of what breed they were, only mentioning that they were the issue of a *prize sow*, he could not inform us upon that point; but let them trace their origin to what they may, they are as fine a pair of pigs as ever crossed the ocean, and we are sure that they are destined to contribute largely towards the improvement of our stock of hogs.

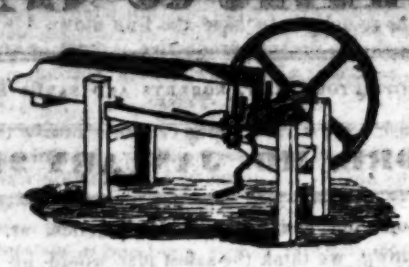
Although we were aware that Mr. Beltzhoover had an *establishment* in our vicinity, and from our knowledge of his character, enterprize, and becoming pride, we expected to see something fine, we confess we were not prepared to see

one so perfect in all its appointments. It does most truly reflect great credit upon his public spirit and judgment. We shall not attempt here to describe it, because from the shortness of our visit, we feel incompetent to do it that justice which it merits, and will content ourself by observing that his cattle, his stables, and his every arrangement, bespeak at once a kind and well-judging proprietor. We were highly gratified at the appearance of his milch cows, and by the bye, they are a noble set, their comfortable accommodation, the cleanliness and neatness of their stalls—and, indeed, we might say, that we were pleased with every thing except the *racks*, and these, we think, he should substitute by capacious *mangers*, and instead of feeding his hay *long*, that he should *cut* it; but the propriety, of this we shall leave to his better judgment—and as we intend, ere long to pay his establishment another visit, with a view of giving a more particular description of it, we will conclude this hasty paragraph by saying that he deserves great credit for what he has done.

We cannot, however, close this notice without observing, that the difference in the order of the heifer which calved on the passage, and those which were in calf, struck us most forcibly, and we think it worthy of mention—that no gentleman, who may contemplate an importation, should purchase a heifer or cow *near* calving, but should always choose those that are young in calf. No man can look on those imported by Mr. Shepherd, without at once seeing the propriety of our remark—while the young mother, from the combined effects of the passage and the suckling of her calf, is greatly reduced in flesh; her associates, who stood beside her, are in fine heart, and look as if they had borne the buffets of the storm without materially being impaired in their condition.

Fattening Chickens.—The following process of fattening chickens, we see highly recommended: Take rice and boil it over the fire in skimmed milk until the grain bursts. This food if given to chickens five or six days, it is said, will make them plump and fat enough to grace an Alderman's table.

"The Scotsman," an Edinburgh paper, speaks of an apple presented to the editor which weighed sixteen ounces, and measured 17 inches in circumference. Another apple previously sent had weighed 19½ ounces. This is indeed something for "Auld Caledonie" to brag of, and no wonder the editor says it made his mouth water to look at it; such a production would be called *considerable of an apple* even on Long Island, where the glorious Newtowns grow.—*Balt. Am.*



We have given above, a cut of a *Cylindrical Straw-Cutter*, and will avail ourself of the occasion to recommend it to the use of agriculturists generally. With its use, many of those engaged in tilling the earth are already fully acquainted, but as we conceive it to be an implement that none should be without, it has struck us that we but consult the interest of all, in calling attention to it, especially at this period when provender of all kinds are so scarce and dear. When we first commenced our little establishment, we bought one of the small Dutch cutting boxes, for the purpose of cutting the straw which we mixed with our horses feed; but upon reflection, we came to the conclusion that a great saving could be effected by cutting their hay, and in order to test the validity of that opinion, we procured of Messrs. *Robert Sinclair & Co.* one of their Cylindrical Straw-cutters, for which we paid $30, and after giving this method of feeding out our hay, a fair trial, we have arrived at the conclusion, that the saving to us has been 33⅓ per cent. During the time that our horses have been fed on cut hay, they have been worked hard, and have still maintained their accustomed good order. We think it must be obvious to every one, that it is consonant to reason that such result should be produced, for independent of there being no loss from *waastage*, the hay thus given is in a better state for mastication, is easier digested from that circumstance, imparts more nutriment to the animal, and because of the greater facility with which he consumes it, gives him more time for *rest*. It must be obvious too, to every one who may have taken the pains to inform himself upon the subject, that hay when fed *long* from the rack, is necessarily subject to great *loss*, as a large portion of every mouthful which the horse takes therefrom, falls on the floor of his stable, is there trampled under foot and becomes useless for food: whereas when cut and fed from the manger all is eaten. So satisfied are we of the superiority of this mode of feeding, that were we to build a thousand stables, we would never have a *rack* in one of them; but would increase the size of the mangers. Should any doubt the utility and saving of this plan, all we ask of them is to give it a fair trial, conscious that one week's experiment will make them converts to our doctrine.

We should, perhaps state, that one of these implements, worked by hand power, is capable of cutting from 300 to 500 bushels of hay per day, according to the industry and fidelity of those engaged in the operation; and surely with such facility of effecting so great a saving, no farmer or planter should hesitate to adopt it on account of the *trouble*; for if either should embrace the opportunity of *wet-days*, the labor of *cutting* his provender would not, in the least, interfere with the ordinary business of the farm or plantation.

The last number of the *Lynchburg Virginian* came to us in a half sheet, in consequence of the destruction of the office of that establishment by fire: We sympathise most sincerely with the proprietors of that excellent and gentlemanly conducted paper, and we are sure from the pleasure we have derived from the perusal of its well filled columns for a number of years, that every reader will regret the occurrence of the catastrophe, as one not only of individual, but public loss. For ourself, we can truly say our feelings have been the more acutely penetrated, because one of the enlightened conductors of that print has set an example in the improvement of the soil, which, while it must prove of lasting benefits to his state, cannot fail to endear him to every one who regards the proper culture of the earth as of the first importance to the nation.

A Large Hog.—Mr. Anthony Hoffman, of Pine Plains, New York, killed on the 16th ult. a hog 21 months old, which weighed when dressed 801 lbs. and sold for $100.

OBSERVATIONS

RELATING TO THE CULTURE OF FRUIT TREES

[Continued.]

To promote the Growth.

It will be proper, early in the spring, to examine such trees as have been planted the preceding fall, to ascertain whether the high winds, which prevail about the time of the breaking up of the frost, may have shaken them loose; if this should be the case, it will be best to have the ground trod firmly around the tree again, as the shaking will be likely to destroy the tender roots as fast as they are put forth, and of course the tree must perish. In order to make fruit trees thrifty, and come early into a bearing state, the ground about the trees ought to be constantly kept mellow, and neither weeds, grass, or crops permitted to grow over the tree roots; and a very great improvement in the growth and appearance of the trees would be made, if a small dressing of manure was annually in the fall spread a-

round where the ends of the roots may have arrived at, and have it immediately dug in—and the young trees always thrive best when the land amongst them is constantly kept under tillage.—The following crops may be raised very suitably among them, provided every, or every other crop is manured:—Potatoes, Pumpkins, Beans, and other vegetables—Wheat, Rye, Oats, and Clover are considered injurious to the newly planted orchard. In order to destroy insects and increase the thriftiness of the trees, prepare a wash for them as follows:—To 10 gallons of strong soap suds, add 1-8th of a bushel of stone lime, and as much soft cow dung as will make the wash of a proper consistance to work with the common white wash brush—put it on the bodies, and as high on the limbs as the brush will work. Early in October or April is the best seasons to wash the trees; a white wash composed of lime and water is often used to good advantage, but is not so safe or useful to the trees, as the above; especially where the trees are covered with a rough bark, and consequently receives too large a share. Soft soap or potash prepared so as to be put on with a brush, is better than either of the above. Persons becoming acquainted with the beautiful, thrifty appearance the above washes will cause the trees to have, as far as the brush touches, will seldom neglect having it done at least once a year, while the trees are young, destroying a large quantity of insect's eggs, and makes the bark so smooth as but to afford few hiding places for them, and at the same time increases the growth of the trees.

Trimming.

Every spring the trees ought to be examined, and trim out any branches that appear as though if left on, might cross or crowd the main branches of the head of the tree, and on looking at it, a judgment must not only be formed from present appearance, but how it would appear three or four years to come, for if a limb should be left on for that length of time, and afterwards have to be cut out, would be a great loss of nutriment, that would otherwise have gone into the main branches, and would have made the tree that much larger; also trim off all the branches that hang too low, or ought to be cut to make the tree balance, and much of the nutriment of the tree will be saved, by trimming off all the superfluous sprouts of spring growth, early in June, with the additional advantage of preventing a recurrence of them, as the wounds would immediately heal over, and would very much diminish the winter or spring trimming. A young orchard may safely be trimmed any time during the winter, when the proprietor can attend to it best, especially if done at least annually, thereby rendering the amputation of large limbs unnecessary.

Apples—Soil, Aspect, &c. proper.

Any lands that will produce good crops of Indian corn will produce good crops of Apples, whilst sandy land, stiff clay, and wet land is unfavorable, as the Apple blooms late in the spring. The aspect is of less account than for most other fruits—however, if protected by native woods, or plantations on the north and west, would be the means of ripening the fruit with a higher flavor, and being protected from high winds would not be so subject to have the fruit blown down. To make an orchard productive, it must be kept rich, especially after it commences bearing.

Pear Trees.

Pear trees whilst young require nearly the same treatment and same soil as recommended for the apple—but as our climate is rather warm for this valuable fruit, which in rich ground and under good culture, frequently grows too rapidly, producing soft spongy wood, and in my opinion renders the tree less capable of withstanding the various changes of our warmest months, and hence impart the cause of the disease called the fire blight.

To counteract the effects of our climate, I would recommend planting in a cold north-eastern aspect, defended by lofty trees on the south-west, at a sufficient distance to prevent the roots from coming into collision with the Pear. And after the tree has put out buds, head it down to the lowest eyes or buds, and once a year shorten the main branches in March, or early in June, in order to prevent the tree from towering high; in other respects trim sparingly, leaving limbs sufficient to absorb the superfluous sap that would be sent up by the roots of the tree, which has not been docked like the *top*—by which means the tree becomes strong, the wood firm, short jointed and hardy; and before the tree may be expected to commence bearing fruit, set the land in grass under them, not to be mowed, but be left on the ground during the hot months to keep it cool. Should it happen that after all the above care has been taken, a limb should be attacked by fire-blight, which may readily be perceived by the leaves changing color, immediately on such a discovery, proceed to amputate the diseased limb, cutting a few inches below the diseased part, as the only way to prevent a further spread of the case, pare off the edge, and cover the wound with soft cow dung or brown paint, if nothing better is handy.

ROBERT SINCLAIR.

[To be Continued.]

(From the Farmers's Register.)

Letter from Cyrus Jacobs, Esq. dated Spring Grove Forge, Nov. 8, 1824.

J. BUEL, ESQ.

Dear Sir—In answer to your queries about lime, I have to inform you that until within the last two or three years, it was but little used as a manure in this neighborhood; it is now more used, and on all soils; some farmers put on first from thirty to forty bushels per acre, and in two or three years afterwards, about the same quantity; the general opinion is here, it operates on corn and clover the soonest. It is put on the land in different ways here; but generally the land is first ploughed, and the lime hauled out of the kiln before it has slacked, and put on in about one bushel in a heap; and as soon as it is slacked, spread immediately, and harrowed twice over and then ploughed in; and in dry weather it often happens that we have to haul water to slack it. Others have the ground all ready for seeding, and haul the lime and put it on the same way, and as soon as slacked, spread it and harrow it twice over, and then sow the seed and harrow it twice over again, which mixes it very well and keeps it near the surface of the ground: this method I think the best; both the above methods are here used. I have had put on my land this season between seventeen and eighteen thousand bushels of lime, and have put it on in both the above ways, and have not put on less than sixty or seventy bushels per acre, nor more than one hundred. I have no hesitation in saying that I have experienced fifty per cent. benefit on corn and grass; in our wheat crops I cannot yet so well judge the benefit, not having limed my land more than two years past, but have not the least doubt but I shall be amply repaid for all the cost and trouble of the lime. Our lands here are nearly all limestone land, and of good quality, and will bear more lime than land of a poorer quality; but it is the general opinion that the poorer soils agree best with lime, and receive the most benefit from it, and no doubt it is the case. Some are of the opinion that limestone land is not much benefitted with lime, particularly for wheat crops, though that is not my opinion; and should I be spared a few years, I shall be better able to judge, as I have for these last two years been liming my land on a tolerably large scale; and have not the least doubt but I shall be fully recompensed for it, both in my wheat crop and other grain; in corn we have already experienced the profit.

I remain, dear sir, very respectfully, your humble servant,

CYRUS JACOBS.

Letter from Daniel Buckley, Esq., dated Salisbury, Pa, Dec. 19, 1824.

J. BUEL, ESQ.

Dear Sir—I received your favor of the 6th of November, requesting information as to the effects of lime upon various soils, the methods of application, its duration as a manure, on what crops most immediately useful, and on what remotely, the quantity applied and at what intervals repeated, the price, &c. A want of confidence in my ability to answer these queries suitably, will compel me to confine my remarks principally to the sphere of my practice and personal observation.

The land which I cultivate, according to M'Clure's treatise, is transition, composed of white and yellow clay and lime-stone, much of the latter appearing on the surface, intermixt with flint. Upon this soil I have made a liberal use of lime, ever since the year 1790, and think I have been well rewarded for the expense and labor, by the increased value of my crops.

The method of applying the lime, which I have adopted in common with my neighbors, is, in the first place, to plough up a sod field with a strong team, in the spring or fall, harrow it the way it is ploughed, and mark the field into as many squares as you intend to put on half bushels, say 100 on the acre, which will bring the furrows about 20 feet apart each way, and require 50 bushels to the acre. This quantity I have found to be most profitable. When the lime is burnt, and as soon as it is cool enough to handle, it ought to be hauled on the land already marked, and a half-bushel deposited in the centre of each square, in as compact a heap as pos-

sible. If water is convenient, I prefer to slack the lime immediately, rather than to wait for rain, as it becomes finer and can be more evenly spread. As soon as it has slacked, it is immediately spread and well harrowed. This method I prefer for Indian corn, barley, oats, rye, and potatoes. On all the above crops I have experienced a great benefit from lime the first year after its application. With potatoes I add about 15 two-horse loads of barn-yard manure to the acre, before planting. A second liming is often given, and much approved of, after an interval of three or more years. This amalgamates better, and can be more intimately mixed with the soil.

There are good farmers who differ as to the quantity of lime that is most profitably applied. Some say 60 bushels on the acre, some 70, and some more. I have applied 100 on an acre of limestone land, at a dressing, but have not been able to discover any benefit from using it thus freely, nor any injury, except in the loss of lime.

Wheat seldom receives any benefit from lime until the second or third year after it has been applied, except it has been mixt in a compost of yard manure and earth. This method is much practised in the lower counties of this state; though not by good farmers until they have applied lime as the basis of amelioration. By this management they have raised their lands from an impoverished state, produced by injudicious cropping, to such a state of fertility, as I am informed, to enable them to fatten a bullock of six hundred weight on an acre, and to cut grass from the same acre sufficient to winter another.

Sundry soils are greatly improved by the use of lime. I lately purchased some of that kind, which was originally covered with chesnut timber, and was called mountain land. It had been cleared seventy years; but lying a distance from the farm buildings, had never received manure, but a dressing of lime. This land I have repeatedly farmed since I owned it; and although to appearance it seemed to be almost a *caput mortuum*, with the aid of ten or twelve four-horse loads of the gleanings of a yard of a public house, it has produced as much, and as good wheat, rye, oats, timothy and clover to the acre, as any land in the township in which it lies. I consider the liming which it had fifty years ago as the principal cause of its fertility.

It is a general opinion amongst good farmers that liming should be repeated every ten or fifteen years, and that the increased crops richly compensate the expense. It matters very little how it is applied, if it is evenly spread after it is slacked. If suffered to air-slack, or to lie after it has been water-slacked, it re-imbibes carbonic acid, which the fire had expelled, becomes lumpy, and is more difficult to be incorporated with the soil. Some spread it upon the sod and plough it under, and think they have as much profit from it in this way as in any other. When thus applied it powerfully contributes to decompose the tougher fibres of the sod, and to convert them into nutriment for the crop.

The price of the lime is governed by the price of wood, the distance the stone has to be transported, the construction of the kiln, and the experience of those who burn it. Where wood costs but one dollar a cord at the kiln, where the stone has to be carted not more than the fourth of a mile, the kiln well constructed, to contain 800 or 1,000 bushels, and the workmen understand their business—the lime can be sold at eight dollars the hundred bushels at the lime-kiln, and leave to all concerned a fair compensation for their labor and expense. I have paid 25 dollars per hundred bushels, delivered on the field, at ten miles distant from the lime-kiln, and think I could not have applied my money to better advantage. This was applied to land of the old red-stone formation. The produce has far exceeded my expectation. I however, make use of barn-yard manure and plaister of paris; the former at the rate of ten four-horse loads to the acre; and the latter at the rate of a bushel and a half on rye, timothy, and clover. Yet I consider lime as the *real mother* of all the sweet grasses.

I am, with sentiments of esteem, your obedient servant,

DANIEL BUCKLEY.

P. S. I have omitted to state, that on land which has been much exhausted, or has naturally a thin soil, we do not apply more than 30 or 40 bushels to the acre, at the first dressings; but in three or four years afterwards, the liming may be repeated to advantage, to the extent of fifty bushels on the acre. D. B.

Letter from William Chapman on the use of Lime in Agriculture.

Sir—Agreeably to your request, I now communicate to you my experience in the use of lime in husbandry.

1st. While with my father in England, I assisted to set out large quantities of lime as a manure. It was applied to all soils upon his farm, viz: moss or turf, clay, black or yellow loam, and sand loam. We put on from two to three hundred bushels to the acre. I have seen land that before liming was so poor, that it would bear nothing but bent and moss, after liming, give the heaviest crops of oats and wheat for ten years; and I have no doubt it would have produced good crops for ten years longer, with suitable alteration of grasses.

2d. I have set out lime on my farm in this country, on stiff clay and on loams, in considerable quantities. It has been particularly beneficial on the clay. I had one field which would produce nothing of consequence until I limed it; after which, I sowed it with rye and grass seeds Both the grain and grass were good, and it is now covered with a fine rich sward. I have used lime for several years, and my confidence in its benefits have not at all been diminished.

3d. I am satisfied that lime is a preventive of smut in wheat, rye, oats, and barley, if the seed previous to sowing, is steeped in brine or lime water, and rolled in fresh slacked lime. And I am equally satisfied it will destroy the insect, or Hessian Fly in the young grain, if sown in the morning when there is a heavy dew on the crop. Some years ago I sowed some spring wheat, and as I had no salt at my farm to make brine, I took stone lime and slacked it in a tub of water; and when the water was as warm as I could bear my hand in, I put in the seed, skimmed off the light matters which floated, and continued stirring the grain for half an hour or more. The grain was then sown; and when it came into its third or fourth leaf, although it looked well, I sowed fresh-slacked lime over the field while the dew was upon it. The crop was very good—while all my neighbors except one, lost almost their entire crop of spring wheat. This one happened to be passing while I was sowing the lime on my young grain, and at my suggestion, went home and sowed upon his own also, and I understand, had a good crop.

In the spring of 1823, I had about three acres of winter wheat, a portion of which looked very yellow when the snow went off. I directed this to be sown with lime; but on visiting my farm two weeks afterwards, I found it had not been done, and the whole field assumed a like yellow appearance. I had the whole immediately sown with lime; the grain immediately improved in appearance, and I had a tolerable crop, though not so good I think, as I should have had, if the lime had been sown two weeks earlier.

Mr. Ebenezer Cady, of Duanesburgh, at my suggestion, adopted my method last spring, of steeping his seed, rolling it in lime, and sowing fresh slacked lime upon his young grain. The experiment was so successful, that this wheat was considered the best in the county.

5th. I have applied lime successfully upon cucumbers, and other garden vines, to protect them from the yellow bug; taking care to repeat it as often as the wind or rain blew or washed off that which had been before applied. Half a bushel of lime, mixed with the earth of an ant-hill, will effectually destroy a colony of these insects.

Your friend,

WILLIAM CHAPMAN.

Albany, Jan. 6, 1825.

[From Hovey's Magazine of Horticulture.]

ON THE CULTIVATION AND MANAGEMENT OF THE RASPBERRY. By J. W. RUSSELL, *Superintendent at Mount Auburn.*

Raspberries are a very useful fruit for the table, for preserving, for making jams, &c., and continue a long time in bearing, and are raised from suckers and layers. They should be planted in a piece of ground by themselves, at the distance of about six feet from row to row, and four feet apart in the rows, either in angles—with three plants, or singly; but as this is altogether a matter of taste in the planting, the operator may please himself, for either of the methods will do equally well; all that is necessary is, not to neglect giving them the distances proposed. The ground should be first well dug and manured, before the raspberries are planted: in selecting them, always choose the strongest and finest growths that spring up from the sides of the old plants, where they have been standing for some years; or encourage the strongest plants that come out betwixt the rows after digging, which should be done annually. In digging the ground the roots are frequently cut with the spade, which will occasion a great number of small plants to come up; of these select the strongest and finest, and hoe up all superfluous ones: some cultivators prefer laying down some of the strongest outside growths in the month of April, as by the following autumn they will make

fine roots, and may be planted out in the plat of ground where they are intended to remain. These will not be so liable to throw up suckers, as those which are produced from suckers.

In the planting out of fresh plats of raspberries preference should be given to damp or moist weather, as the roots are very tender, and liable to be hurt when exposed to a dry air. If, however, they are planted in dry weather, take care to moisten the roots with water, and cover them with old bass mats, or leaves, while they remain out of ground. In planting, open a trench with the spade along the line where the suckers or layers are to be set out; cut off a portion of the small fibrous roots, preserving all the stronger ones; put them into the trench, and cover them with some earth; then have them well watered, and throw the remainder of the earth over them, letting them remain till you have finished planting the whole ground. Then, where you first began to plant, go over and tread the ground with your foot along each of the trenches, and in the same direction as you planted, and level all the ground smooth and even—taking off any stones or rubbish that may be left on the surface. In dry weather the plants should be watered two or three times a week, till they have taken root. It will be necessary to put stakes to the strong growing sorts, to tie them up to, which will prevent their being broken by the wind, or beaten down by the rain.

In November, or before the ground freezes up, the old bearing wood should be cut out, being of no more use, as the fruit is always produced from the wood of the preceding year; therefore, take out all the wood that bore fruit this year, and select four or five of the most vigorous and strong shoots of this year's growth, to bear fruit the ensuing season: shorten the tops of each, according to their strength; and the most sure way of preserving them through the winter is to lay them down in straight rows, covering them over about six or eight inches deep with the soil. As a great many of the stronger canes are frequently broken in laying them *down*, I would recommend the placing of four or five spadesful of soil close to the stool, so that the shoots can be easily brought over it in a rounding position; this will be found to answer the purpose so well, that seldom if ever any breaking will be made in laying them down.

In the spring they must be uncovered as soon as the frost leaves the ground, and immediately tied up to the stakes—remembering that delays are dangerous.

An old plat of raspberries will continue in bearing six or seven years, by which time a fresh plantation should be made to succeed them. The young plants will bear some fruit the first year, and come into full bearing the second after planting. If they are suffered to remain longer without renewing than the time specified, they will degenerate, and bear *small fruit*: frequent hoeing and cleaning between the rows is a very necessary process, and should not be neglected. The following are the sorts best worth cultivating:—

Nottingham Scarlet Smooth Cane,
White Antwerp,
Red Antwerp,
Smooth Cane Double-bearing,
Large Red,
Barnet,
Early White,
Large White, &c. &c.

Messrs. Thomas and William Mason, Charlestown Vineyard, have a collection of fine sorts for sale.

I am yours, &c.

J. W. RUSSELL.

Mount Auburn, Cambridge, Dec. 12, 1836.

MR. COOKE: I send you the result of an experiment which I made the past season upon seeding potatoes. The land, manure, and culture, was exactly the same.

1. One very large potato in each hill,	17
2. Two quarters of a very large potato to a hill,	14
3. Two halves of a common sized one	11
4. Four small ones to a hill,	13

I have reduced the quantities to decimals, that the relative proportions may be seen at once. I repeated the experiment in another part of the field, but with the same result. *Large whole* potatoes produced the *best* and *most abundant* crop. In one row I put two large potatoes to a hill, and the yield was a trifle less than where I put only one large one to a hill. If I had planted an acre, and seeded it as in the first case, there would have been about 340 bushels.

an acre of the second,	280	"
" third,	220	"
" fourth,	260	"

The difference between the first and third is 120 bushels, which at 25 cts. per bushel, amounts to $30. Now if I should have nothing but little potatoes to plant next spring, I should do well to throw them away and buy large ones at one dollar per bushel; and yet how many there are who are so "short out" for potatoes, that they are obliged to pick out all that are fit for planting, to eat, and then plant the leavings. Says farmer B. I don't know how it is, but I never have more than half potatoes enough, and I plant as many as any of you. The thing is you plant too many. Such as you plant count up fast. The potato has been wonderfully improved, and I think it may be still greatly improved, both in quantity and quality, by planting good seed on good ground, with good cultivation.

LEONARD K. HATCH.

Alstead, Nov. 25, 1836. *Silk Grower & Agr.*

EXPERIMENTS WITH MIXTURES OF ASHES, GYPSUM, LIME, &c. APPLIED TO CORN, WHEN PLANTED.

To the Editor of the Farmers' Register—

Should the following statement of experiments, made in planting this season's crop of corn, (though presenting negative results, be thought of any importance to the readers of your valuable Register, it is at your service.

Experiment 1st.—2 bushels of unleached ashes and 1 bushel of gypsum.

Experiment 2d.—2 bushels of unleached ashes, and 1 bushel of gypsum.

Experiment 3d.—1½ bush. of unleached ashes, one bushel of gypsum, and one gallon of salt.

Experiment 4th.—1½ bushels of unleached ashes, 1 bushel of gypsum, and ½ bushel of caustic lime.

The above four compounds were separately applied on a marked length of five rows, at the rate of a full handful to each hill of corn, previous to covering, with six rows intervening between each experiment without any application, the soil of the whole being of good quality, and presenting a favorable opportunity for judging of the results.

Experiment 5th.—17½ bushels of leached ashes, 5½ bushels of gypsum, and 2 bushels of caustic lime: this mixture was also applied at the rate of a full handful to each hill of corn, with intervening rows, without any application.

Experiment 6th.—16 bushels of unleached ashes, 5½ bushels of gypsum, and 2 bushels of caustic lime, applied in the same proportion to each hill, as in the preceding experiments, and also with intervening rows without any application.

Experiment 7th.—20 bushels of gypsum, 2 bushels of caustic lime, and 2 pounds of sulphur: this mixture was applied in various proportions, from a handful to 2 hills of corn, to the same quantity on 4. Connected with and forming a part of this experiment, were 5 bushels of gypsum deprived of its water by heating, and applied at the rate of a handful to two hills of corn. A few days ago when cutting down this corn, I found that the gypsum, though artificially deprived of its constituent proportion of water, had, on coming in contact with the water in the soil, re-absorbed it, and formed into a hard cake, very slightly mixed with particles of the soil: from this I infer, that gypsum thus prepared, cannot properly or beneficially be applied in such quantities as in the above experiment. None of the gypsum used in this experiment, without being deprived of its water, though applied in the same quantities to each hill, can now be seen.

These experiments cover a space of ground altogether, of nearly 40 acres, on soils presenting considerable difference, and so arranged as plainly to exhibit any benefit which might have been derived from them, and every care was used in the due application of the different mixtures, and not without hope of considerable benefit: in this, however, I am disappointed, as not the slightest apparent benefit has been derived from any of these experiments.

Similar experiments made with ashes and gypsum by others, as reported in the Register and other agricultural periodicals, present highly beneficial results, not only in the increased growth of the corn, but in protecting it from the ravages of insects and crows. In this latter supposed benefit, I derived as little apparent good as in the growth of corn. What causes may have operated to produce this difference in results, in experiments so nearly alike, cannot probably be accurately known. All of the soil on which the above experiments were made, had been rendered calcareous by the free use of marl, which may so far account for the want of benefit from the application of the ashes and lime. That

no benefit was derived from this liberal use of gypsum, I attribute to the soil already containing a sufficient proportion of that combination of lime for fertilizing purposes. In this belief I am strengthened by having it applied to clover sown among the corn in the same field, and adjoining these experiments: a part of the clover was left unplastered, and exhibited no inferiority to that which had gypsum applied at the rate of 1 bushel per acre.

The expense attending these experiments was considerable in point of labor—at least doubling the expense of corn planting—and in this case, without any remunerating results: notwithstanding which, I am still of opinion, that on soils not calcareous, either naturally or artificially, this mode of applying ashes would be attended with highly beneficial results, as experience has proved that sulphate of lime is inert on soils that are not calcareous. E. L.

October, 9th 1836.

MR. COCHRAN'S IMPROVEMENT IN FIRE ARMS.

We copy the following account of Mr. Cochran's invention and Adventures. It will be found highly interesting.

Cochran's Many-Chambered Non-recoiling Rifle—This extraordinary invention of a young American, native of New-Hampshire, and which is now being for the first time exhibited to the public, at the Fair of the American Institute, Niblo's Garden, deserves more than a passing notice. There are circumstances connected with it, which give a peculiar, if not romantic, interest in the history of the arts of our country. If any thing were wanting amidst the multitude of extraordinary inventions which have, for the last half century, been recorded in the archives of our patent office, to illustrate and establish the pre-eminent claims of our countrymen to genius of a high order, it would be that which forms the particular subject of our remarks.

Mr. Cochran's father was a lawyer, and afterwards a merchant of eminence in Enfield, N. H. and the son, John Webster Cochran, was born there, and has invented the species of fire arms in question, was brought up to no particular business. At the very early age, however, of 16, he discovered a strong taste and passion for mechanical experiments, and was constantly occupied in the construction of machinery, which his father approving of, unlike many other fathers, encouraged, and to further the wishes of his son, expended several thousand dollars in his behalf, in the cost of the different kinds of apparatus required.

When only 18, he made the discovery in question, but did not perfect it until three years after. He then went to France and England, and exhibited his model cannon to Louis Philipe and William the IV. While at Paris in 1833–'34, he was requested by the Turkish Ambassador to explain it to the Turkish Minister at London, and accordingly went to Woolwich, and performed a series of experiments before the latter personage, which gave so much satisfaction that he urged Mr. C. to visit the Sultan at Constantinople, and for that purpose provided him with the most flattering recommendations to the court of the Sublime Porte. Mr. Cochran arrived at Constantinople, February, 11th, 1836, was received with great distinction, and introduced to the Sultan by the Grand Vizier. His Turkish Majesty was highly pleased with the experiments made with the model, told Mr. C. he was satisfied it would be generally adopted, and requested him to cast twelve pounders on the same principle. He was provided with elegant apartments in Pera, raised to the dignity of Master of Cannon, and furnished with as many workmen as he required for the accomplishment of his task. The treatment, in fact, which he received, was equivalent to that of the rank of an Ambassador.

Mr. Cochran, however, finding there was no good foundry or mechanics, was obliged to undertake the work with his own hands; and though not brought up to the business of making machinery of any kind, by dint of much labor and perseverance, made himself all the necessary implements, the augers and the wooden apparatus for boring with horse power, and the preparations required for procuring the proper castings. By good fortune he succeeded entirely to his wishes, and cast and bored three cannon, two of one pound each, and the third a *twelve pounder*, which last was finished in a style as perfect as he could have desired. On the 14th September following he proved this last piece to his entire satisfaction, in the presence of all the chief officers of the Turkish government, who were delighted with its execution, and made a highly flattering report to the Sultan. He fired it off in the presence of those officers to their utter astonishment 100 times in fifteen minutes. The Sultan when he heard of it, would scarcely believe it, and directed Mr. C. to perform the same experiments in his presence. The most extensive preparations were accordingly made for this important trial, which was to take place at Tarache, on the European side of the Bosphorus.

No less than 8000 troops were assembled at this spot. The Sultan at the hour appointed, came over from his summer residence on the Asiatic shore, rowed in one of his splendid *caiques*, and preceded by a long line of other boats, of the same description. The one which announced the approach of the Sultan was manned by 40 oarsmen, and came with even more lightning speed than that in which his most august highness himself was seated. As the latter was seen nearing the wharf, Mr. Cochran, at the suggestion of Halil Pacha, the Sultan's son-in-law, and commander-in-chief of the land forces, fired off a salute of 21 guns (the customary number) with the experimental cannon, which consumed less than two minutes, and struck the assembled multitude with the utmost amazement.

As the Sultan at this moment stopped on the wharf, Halil, accompanied by the Grand Vizier, and other dignitaries, ran to his Majesty, and the former, making the usual salaam of kissing the Sultan's foot, announced to him with feeling of exultation that could scarcely be repressed, the wonderful success of the machine cannon, as they appropriately named it.

The Sultan arrived at his tent, then sent for the *master of the cannon*, the title which was given to Mr. Cochran, and after a short conference with him, in which Mr. C. conversed chiefly in the Turkish language, which he had partially acquired, the Sultan renewing his expressions of kindness, requested him to perform the experiment in his presence. His Majesty had placed himself within a few feet of the piece, and Mr. Cochran commencing rather sooner than was anticipated, the Sultan, then with his back towards the cannon, was somewhat startled at hearing the explosions suddenly succeeding each other with such inconceivable rapidity. The cannon was fired 100 times as before in 15 minutes, during which the barrel acquired 650° of heat, while the revolving cylinder which contained the charges, was comparatively cool, being only 250° of the temperature. The Sultan's exclamation expressive of his delight was, "God save the Americans—if such boys as you (Mr. C. being then but 21) can invent such things, what can your men do!"

He then asked him for the bill of expenses, and being told by Mr. C. it was left at his own pleasure, he went the next day at the request of the Sultan to visit him at his palace. The bag of gold he there received was truly an imperial present, and enough to make his fortune. The amount would scarcely be believed should we name it, and we do not feel ourselves authorized to specify the sum more distinctly than may be inferred from what we have said.

Mr. Cochran soon after returned to America, with an understanding that he should have a contract for supplying a large number of cannon of the pattern exhibited, whenever it would be agreeable to him to execute it.

These adventures of Mr. Cochran, yet a youth, seeking in a foreign land that patronage and encouragement which were the proper measure and appreciation justly due to his pre-eminent talents, and which it is lamentable to be obliged to confess, his own countrymen would not have bestowed upon him, recall the similar examples of West, Fulton, Perkins, and others, and are calculated to reflect discredit upon our national reputation, inasmuch as Americans ought to be the first to reward these incentive powers which are so emphatically characteristic of, as well as honorable to the genius of our people.

Description of the Invention.—The invention of Mr. Cochran is adapted to every species of fire arms. The articles at present being exhibited by him at the Fair are a model cannon similar to that experimented upon before the Turkish Emperor, and a rifle complete, which we shall now proceed to describe. He has fired this rifle 1200 times, 500 of which discharges were in rapid succession, and without producing any expansion whatever in the chambers of the cylinder, or giving it a greater temperature than 100 degrees of Fahrenheit. As many as 2000 discharges are required before the rifle will have been properly tested after the rule of the war department. Mr. C. is ready at any time to fulfil this compliment and go beyond it. This afternoon he will fire it at Niblo's Garden 500 times in succession. The cylinder is a solid piece of iron, revolving in the plane of the barrel, and occupying a position directly at the base of the barrel which it is in close contact with.—The dimensions of the cylinder are in diameter about 4 inches, and in thickness seven-eighths of an inch. There are in this one, nine open chambers for the charges, which chambers are perforated upon the periphery and converge, like the

radii upon the centre. The cones on which the percussion caps are placed, form another series of radii concentric, and within the circuit of the chambers—a solid metallic partition dividing all the caps from each other. Each cone for the cap communicates with its appropriate chamber, and opens in the centre of the chamber, so that the whole charge of powder is ignited at once, by which the explosion of all the powder is made in one-half the time of ordinary rifles, and therefore so much the more force given to it, and consequently a much less charge is required—the weight of the charge being only *one grain and a half.*

As each chamber in its revolution comes in exact line with the tube of the barrel, the cock strikes the percussion cap, and the explosion takes place instantaneously. The chambers as they successively come into a line with the barrel in the revolutions of the cylinder, are momentarily retained firm in this position by the *regulating dog* connected with the cylinder where it joins the breach, and the pin of which dog catches in the small perforations made at equal distances for its reception. Nor can the cock strike the percussion cap until it is in exact position, for if the chamber is not in its proper place, the socket into which the hammer of the cock falls has presented to it only the metallic partitions between the cones, and therefore on striking these no explosion can take place. Nor can any accident happen from explosions of the other chambers contiguous to the one in connection with the barrel. Such an accident never did happen with this rifle, and if it should, the direction of the chambers is such that their charges would do no mischief. Nor can the flash of the powder in the chamber in a line with the tube of the rifle be communicated to the other chambers, as the joint of the cylinder where it comes in contact with the barrel is so close, that it is air tight, and will not permit of such extension of the ignited powder. The charge of one grain and a half of powder requires a size of ball of 50 to the pound, and the force is sufficient to perforate eight boards each of one inch thickness, at the distance of 60 feet. The arrangement of the ball is another beautiful and ingenious invention. Their diameter is exactly fitted to the chamber, but larger than the diameter of the tube of the barrel by an incremen equivalent to the depth of the spiral creases on the inside of the tube. So that no patch is required as in other rifles, for it is forced into the tube of the barrel and exactly fitted to it, by becoming compressed into a cylindrical shape, and its sides grooved by the creases of the barrel, whereby it is kept firmly in its course, and move steadily and with such precision, and so closely wedged that there is no *windage* can get before the ball, and give an irregularity to its motion—a serious inconvenience to which all other rifles are liable. The aim of Mr. Cochran's rifle, therefore, is always deadly and sure.

By this arrangement there is another additional power acquired, for you have the entire force of the charge behind the ball until it leaves the muzzle, and in the same proportion is the velocity augmented, and, therefore, a less charge required on this account, as well as on account of the manner in which the percussion caps communicate with the chambers, as already stated. The creases of the barrel, as we before said, keep the ball exactly in its place throughout its whole course to the muzzle, whereas the patch, always used in ordinary rifles, is constantly liable to tear, which causes the irregularity in the ball's motion, and defeats the very object for which rifles were intended. The manner in which the percussion cones communicate with the middle of the chambers, causes the powder to explode in one half the time it would if the ignition took place at the end of, and posterior to the chamber.

As an evidence of the accuracy and effectiveness of this rifle, Mr. Cochran related a bear hunt, in which he took part, a few days since, on the Moose Mountains, in his native state of New-Hampshire. He fired at the animal with the rifle now at the Exhibition, and lodged nine balls in his brain, while he was under full way, at the distance of some four or five rods from him. The bear was brought to the ground, and the nine balls recognised and identified from the others lodged near them, by the grooves made in them by the creases of the tubes, and by their cylindrical shape. His brother sportsmen, who had, until then, deemed themselves in possession of good sporting pieces, expressed themselves in raptures at the superiority of their young countryman's magic rifle.

Another remarkable property in this rifle is, that it has not the least recoil whatever, so that there is not the slightest jar or irregularity in the direction.

The rifle will be fired at Niblo's 500 times in succession on this afternoon. The patent right for the rifle and pistol, for the United States, has been sold by Mr. Cochran to the trustees of a company in this city, for $300,000. Richard & Richardson, No. 41, South-street, are the agents for the company, and have a large manufactory at Springfield, Massachusetts, and are selling the rifles faster than they can make them.

Col. Bomford, at the head of the ordnance department, U. S. army, who was present at the Fair, was so much pleased with Mr. Cochran's rifle, that he ordered him to make one, and bring it to Washington for experiment.

SILK.—The Northampton Silk Company have been manufacturing Sewing Silk for the last three months in large quantities. Some of it we saw the other day, is as highly finished and as smooth as the best Italian. They make over 60 pounds a week. They are just beginning the manufacture of silk fabrics, and when the new factory building is finished, they will do more in this way than all the other establishments in the country put together.—*Northampton Courier.*

CONTENTS OF THIS NUMBER.

Reference to articles on use of lime—visit to Mr. Beltz's hoover's farm and notice of the remainder of Mr. Shepherd's importation of cattle and hogs—method of fattening chickens—large apples—value of cylindrical straw cutters—notice of the destruction by fire of the Lynchburg Virginian—a large hog—observations on the culture and growth of fruit trees—communications on the use of lime—method of cultivating the raspberry—experiments in the culture of corn—description of Cochran's improvement in fire arms—manufacture of silk—prices current—advertisements.

BALTIMORE PRODUCE MARKET.

☞ These Prices are carefully corrected every MONDAY

	PER	FROM	TO
Beans, white field,	bushel.	1 75	——
Cattle, on the hoof,	100lbs.	6 50	8 50
Corn, yellow,	bushel.	95	1 00
White,	"	95	1 00
Cotton, Virginia,	pound.	——	——
North Carolina,	"	——	——
Upland,	"	18½	20
Louisiana 20a21—Alabama	"	18	21
Feathers,	pound.	50	——
Flaxseed,	bushel.	1 62	1 75
Flour & Meal—Best wh. wh't fam.	barrel.	12 00	13 00
Do. do. baker's,	"	——	——
Do. do. Superfine, ex.	"	10 50	10 75
Super How. st. in good de'd	"	10 50	10 75
" " wagon price,	"	10 25	10 50
City Mills, super	"	10 00	10 25
Do extra,	"	10 25	10 50
Susquehanna,	"	——	10 50
Rye,	"	7 25	7 50
Kiln-dried Meal, in hhds.	hhd.	——	31 00
do. in bbls.	bbl.	——	4 62
Grass Seeds, red Clover,	bushel.	8 00	8 50
Timothy (herds of the north)	"	3 00	3 75
Orchard,	"	——	2 75
Tall meadow Oat,	"	——	2 75
Herds, or red top,	"	——	1 25
Hay, in bulk,	ton.	——	20 00
Hemp, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
Hops, on the hoof,	100lb.	7 75	8 50
Slaughtered,	"	7 25	7 75
Hops—first sort,	pound.	16	——
second,	"	14	——
refuse,	"	12	——
Lime,	bushel.	35	37
Mustard Seed, Domestic, —¼ blk.	"	3 50	4 00
Oats,	"	(2	65
Peas, red eye,	bushel.	——	——
Black eye,	"	1 12	——
Lady,	"	——	——
Plaster Paris, in the stone,	ton.	4 75	——
Ground,	barrel.	1 50	——
Palma Christa Bean,	bushel.	——	——
Rags,	pound.	3	4
Rye,	bushel.	1 35	1 40
Susquehannah,	"	——	——
Tobacco, crop, common,	100 lbs	3 50	4 50
" brown and red,	"	4 50	0 00
" fine red,	"	7 00	7 90
" wrappery, suitable	"	——	——
for segars,	"	5 00	10 00
" yellow and red,	"	6 00	8 00
" good yellow,	"	8 00	12 90
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	8 00
Virginia,	"	7 00	14 00
Rappahannock,	"	——	——
Kentucky,	"	8 00	14 00
Wheat, white,	bushel.	——	2 30
Red, best	"	2 10	2 15
inferior,	"	1 25	1 75
Whiskey, 1st pf. in bbls.	gallon.	42	42½
" in hhds.	"	39½	——
" wagon price,	"	36	37
Wagon Freights, to Pittsburgh,	100 lbs	1 75	——
To Wheeling,	"	2 00	——

		washed.	unwash
Wool, Prime & Saxon Fleeces,	pound.	50 to 60	30 32
Full Merino,	"	45 50	28 30
Three fourths Merino,	"	42 45	26 28
One half do.	"	38 42	26 28
Common & one fourth Meri.	"	35 38	26 28
Pulled,	"	38 40	26 28

Howard st. Flour, sales limited, receipts very light.

PLACE WANTED AS OVERSEER.

A young, industrious, and enterprising man, who is a good farmer and understands the management of hands, wants a situation in the above capacity. Any person wishing to employ such a person will please address a letter to Elie Plummer, Chestertown, Md. no 15 2t

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
Apples,	barrel.	——	——
Bacon, hams, new, Balt. cured	pound.	17	18
Shoulders, do	"	——	15
Middlings, do	"	——	15
Assorted, country,	"	—	14
Butter, printed, in lbs. & half lbs.	"	25	37
Roll,	"	20	28
Cider,	barrel.	1 00	1 25
Calves, three to six weeks old	each.	4 50	6 00
Cows, new milch,	"	35 00	50 00
Dry,	"	10 00	13 00
Corn Meal, for family use,	100lbs.	2 06	2 12
Chop Rye,	"	——	2 25
Eggs,	dozen.	18	25
Fish, Shad, No. 1, Susquehanna,	barrel.	——	——
No. 2,	"	——	——
Herrings, salted, No. 1,	"	3 50	——
Mackerel, No. 1, —— No. 2	"	9 50	10 50
No. 3,	"	——	6 75
Cod, salted,	cwt.	——	——
Lard,	pound.	16	17

BANK NOTE TABLE.

Corrected for the Farmer & Gardener, by Samuel Winchester, Lottery & Exchange Broker, No. 94, corner of Baltimore and North streets.

U. S. Bank,	par
Branch at Baltimore,	do
Other Branches,	do
MARYLAND.	
Banks in Baltimore,	par
Hagerstown,	¼a
Frederick,	do
Westminster,	do
Farmers' Bank of Mary'd,	do
Do. payable at Easton,	½
Salisbury, 5 per ct. dis.	
Cumberland,	1
Millington,	do
DISTRICT.	
Washington, Georgetown, Alexandria,	Banks, ½.
PENNSYLVANIA.	
Philadelphia,	¼a
Chambersburg,	1
Gettysburg	do
Pittsburg,	2a2½
York,	¼a
Other Pennsylvania Bks.	1¼a2
Delaware [under $5]	3a4
Do. [over 5]	¼a½
Michigan Banks,	6a
Canadian do.	6a

VIRGINIA.	
Farmers Bank of Virginia	1
Bank of Virginia,	do
Branch at Fredericksburg	do
Petersburg,	do
Norfolk,	do
Winchester,	do
Lynchburg,	do
Danville,	do
Bank of the Valley,	½
Branch at Romney,	1
Do. Charlestown,	do
Do. Leesburg,	1
Wheeling Banks,	2¼a3
Ohio Banks, generally	3a3¼
New Jersey Banks gen.	1¼a2
New York City,	¼a
New York State,	2¼a3
Massachusetts,	2a2¼
Connecticut,	2a2¼
New Hampshire,	2a2¼
Maine,	2a2¼
Rhode Island,	2a2¼
North Carolina,	3¼a4
South Carolina,	3¼a4
Georgia,	3¼a4
New Orleans,	6

THE SILK MANUAL.

JUST published and for sale by *Sinclair & Moore* and *Robt. Sinclair, Jr.*, at the *Maryland Agricultural Repository, Light near Pratt street, Baltimore*, a complete *Manual of the Silk Culture*, in which plain instructions are laid down for the *culture of the Mulberry, the feeding of the Silk worms*, management of the cocoons, reeling, spinning and dying of the Silk. In fine, it is a perfect Manual, and comprises every department of the business. The rules are arranged in so plain and methodical a manner that every one can understand them, and by a very few hours attention become master of the business. It is clearly demonstrated in this Manual, that largely upwards of $500 may be netted from an acre in the Culture; and it is a singular fact connected with the Mulberry as adapted to the making of Silk, that poor dry, sandy, or gravelly land suits it best, the fabric made from worms fed on leaves raised on such soil, being greatly superior in elasticity and richness of gloss to those grown on rich grounds.

Price—per copy, 50 cents.

FOR SALE,

A half Durham and half Devon Bull, — years old of fine model and size. As his owner has no use for him he would be sold a bargain. Apply to the editor. no 15

FRUIT AND ORNAMENTAL TREES AND SHRUBS FOR SALE,

At Clairmont Nurseries, near Baltimore.

THE subscriber hereby informs his customers and others, that his stock for sale this season of all articles common in the nursery line, except the tenderest green house plants, are very thrifty and mostly of large size, and of extent and variety not surpassed by many, if any in America. Particularly the Apple and Peach; Ornamental trees; Roses and other Shrubs. Of the Morus Multicaulis, white Italian and other Mulberry Trees, he has got about 100,000; the former, 2 to 7 feet high, strong thrifty plants with good roots; white Italian, also the same for their height, 1 1-2 to 4 feet—the 2 feet and 1 1-2 will be sold low, and all other articles on moderate terms. For prices and sorts of fruits, ornamental trees, shrub, and fruit shrubs, &c. see printed and priced catalogues to be had of the subscriber, gratis. He has a superb collection of Double Dahlias, now in full bloom, comprising upwards of a quarter of an acre. To see them, and the nursery generally, the citizens and others are respectfully invited.

no 27 ROBERT SINCLAIR.

A DURHAM BULL.

THE editor of the Farmer and Gardener, Baltimore, has for sale, in this city, a beautiful young bull 2 years old, of the Improved Durham Short-horn breed.—He is red and white, beautifully marked, and of great beauty of form and points.

Baltimore, Dec. 27, 1836. 3t

DEVON STOCK.

THE *editor* of the *Farmer and Gardener* can at all times supply orders for Devon Cattle. This breed is so distinguished for their easy keep and docility, the richness of the milk of the cows, and for the activity and sprightliness of the oxen, that they would be admirably suited to the purposes of southern agriculturists.

The happy adaptation of the Devonshire Oxen, for the purposes of the farm, will be understood, when it is stated that 4 oxen have been known to plough 2 acres of ground in a day, and a team of them to trot at the rate of 6 miles an hour with an empty wagon.

Any person wishing to procure them can be supplied by addressing a letter, post paid, to the editor of the Farmer and Gardener. no15

MORUS MULTICAULIS TREES.

THE SUBSCRIBER has for sale, 4,000 Morus Multicaulis trees, one and two years old, which he will sell at $25 per hundred.

EDWARD P. ROBERTS,

Balt., Dec. 13. Editor Farmer & Gardener.

A JACK FOR SALE.

THE editor of the Farmer and Gardener, Baltimore, has for sale a small though beautiful and well bred Jack. He was got by Capt. Gordon's celebrated Malta Jack: his dam was a descendant of General Washington's Spanish Jennet. He will be 5 years old next spring, is 46 inches high, straight limbed and finely proportioned. His sire was distinguished for his great vigor and power in serving mares, being known to have done good service to six, in as many hours, and it is believed, that though his son is small of stature, owing to bad keep, that he inherits equal verility with his sire.

Price, $500.

All letters upon the subject must be post paid.

AN AYRSHIRE BULL FOR SALE.

A Bull of the above breed, of well attested pedigree, is now on sale by the editor of this paper.

Letters on the subject must be *post-paid*. oc1

PATENT HORSE SHOES,

Made of best refined Iron, and every shoe warranted—Any failing to render the most perfect satisfaction will be received back, and the money paid for the same refunded. A constant supply for sale by

THOMAS JANVIER, Agent,
87 Smith's wharf.

P. S. Henry Burden of Troy, N. Y. has obtained letters patent from the government of France, granting him the exclusive privilege of manufacturing horse shoes by his *newly* invented machines. nov 29 3m

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